RESPONSE TO COUNTY OF SAN DIEGO REVIEW COMMENTS

MEADOWOOD (PANKEY RANCH) SAN DIEGO COUNTY, CALIFORNIA

GEOCON
INCORPORATED
GEOTECHNICAL
CONSULTANTS

PREPARED FOR

PARDEE HOMES
SAN DIEGO, CALIFORNIA

SEPTEMBER 16, 2008
PROJECT NO. 06931-42-01

Project No. 06931-42-01
September 16, 2008

Pardee Homes
12626 High Bluff Drive, Suite 100
San Diego, California 92130

Attention: Ms. Karen Kosup

Subject: MEADOWOOD (PANKEY RANCH)
SAN DIEGO COUNTY, CALIFORNIA
RESPONSE TO COUNTY OF SAN DIEGO REVIEW COMMENTS

References:
1. *Update Geotechnical Investigation, Meadowood (Pankey Ranch), San Diego, California,* prepared by Geocon Incorporated dated November 20, 2006 (Project No. 06931-42-01).
2. *Addendum to Update Geotechnical Investigation, Meadowood (Pankey Ranch), San Diego, California,* prepared by Geocon Incorporated dated September 19, 2007 (Project No. 06931-42-01).

Dear Ms. Kosup:

In accordance with your request, we have prepared this letter to respond to County of San Diego review comments regarding rockfall potential at the subject project. Our update geotechnical investigation (Reference 1) identified the potential for rockfall on the project site. The County of San Diego wants lots that may be subject to a rockfall hazard identified and specific measures provided that would reduce the hazard to less than significant. To provide mitigation measures, Geocon Incorporated performed additional detailed field mapping to locate potentially unstable boulders.

Based on our field mapping, rockfall potential exists on the west-facing slope of Rosemary's Mountain at the south end of the property. Rosemary's Mountain consists of granitic rock in varying stages of decomposition with numerous exposed hardrock ledges and cores stones. The area of potential rockfall includes the east side of proposed Horse Ranch Creek Road from Pala Road to approximately 3,000 feet into the project area. During our field studies boulders were observed on the natural slopes above the road and east of the school site that have either been undercut by erosion or appear to be precariously balanced. Based on field observations the highest potential area for rockfall is located approximately 1,000 feet north of Pala Road. Several large boulders were observed at the base of this slope in the flat area west of future Horse Ranch Creek Road. Areas to the north and east of Rosemary's Mountain are underlain by gabbroic rock with a very weathered mantle (decomposed granite) with very few exposed corestones.

Figures 1 and 2 (map pocket) show the approximate locations of specific boulders that have been identified with a rockfall potential. Specific lots that could be impacted include the school site and Lots 356, 357, 359 through 364. These lots are located on the west side of Horse Ranch Creek Road from near the project entrance up to and including the proposed school site.

It is our opinion the most feasible method to reduce rockfall potential is to remove the boulders from the slope and/or break down the boulders such that they cannot roll downslope. To accomplish this, we recommend the following:

1. Boulders identified that have been eroded at the base or are entirely free from the soil should be broken and removed from the slope. This will require use of an excavator with a rock breaking device or drilling the rock and using chemicals that break rock.

2. Identified boulders that are partially embedded should be broken down to the ground surface and the broken portions removed from the slope. The embedded portion that remains should be shaped relatively flat or on contour with the slope face to create a rock with a shape that will not roll.

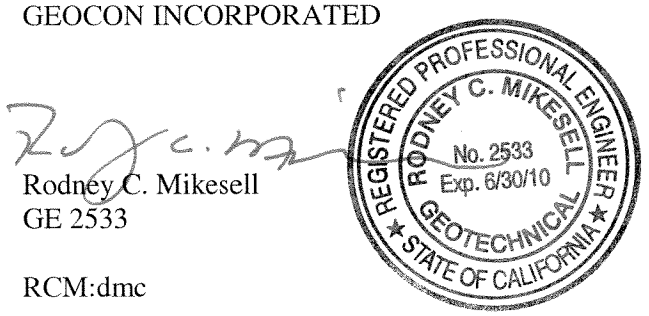
3. Boulders that are small enough such that they can be moved with conventional grading equipment can be rolled or pushed down the slope.

4. Disturbance to the slope should be limited to the area immediately around the boulders and the area below the boulders if the boulders need to be pushed down the slope. We estimate the total disturbed area to be about 0.5 acres for the combined area immediately around all of the boulders, and an additional approximately 1-acre if all of the boulders had to be removed by pushing down the hillside. This assumes a 10-foot wide area from below the boulders to the toe of the slope. This also assumes boulders in the same general area can be pushed down the same dozer trail. The existing hillside does contain numerous access roads and trails that can be used to reach some of the boulders. However, at some boulder locations new access roads will be required and will likely disturb natural ground. Where new access is required, a width of 15 feet should be considered for calculating disturbed vegetation area.

Should you have any questions regarding this letter, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

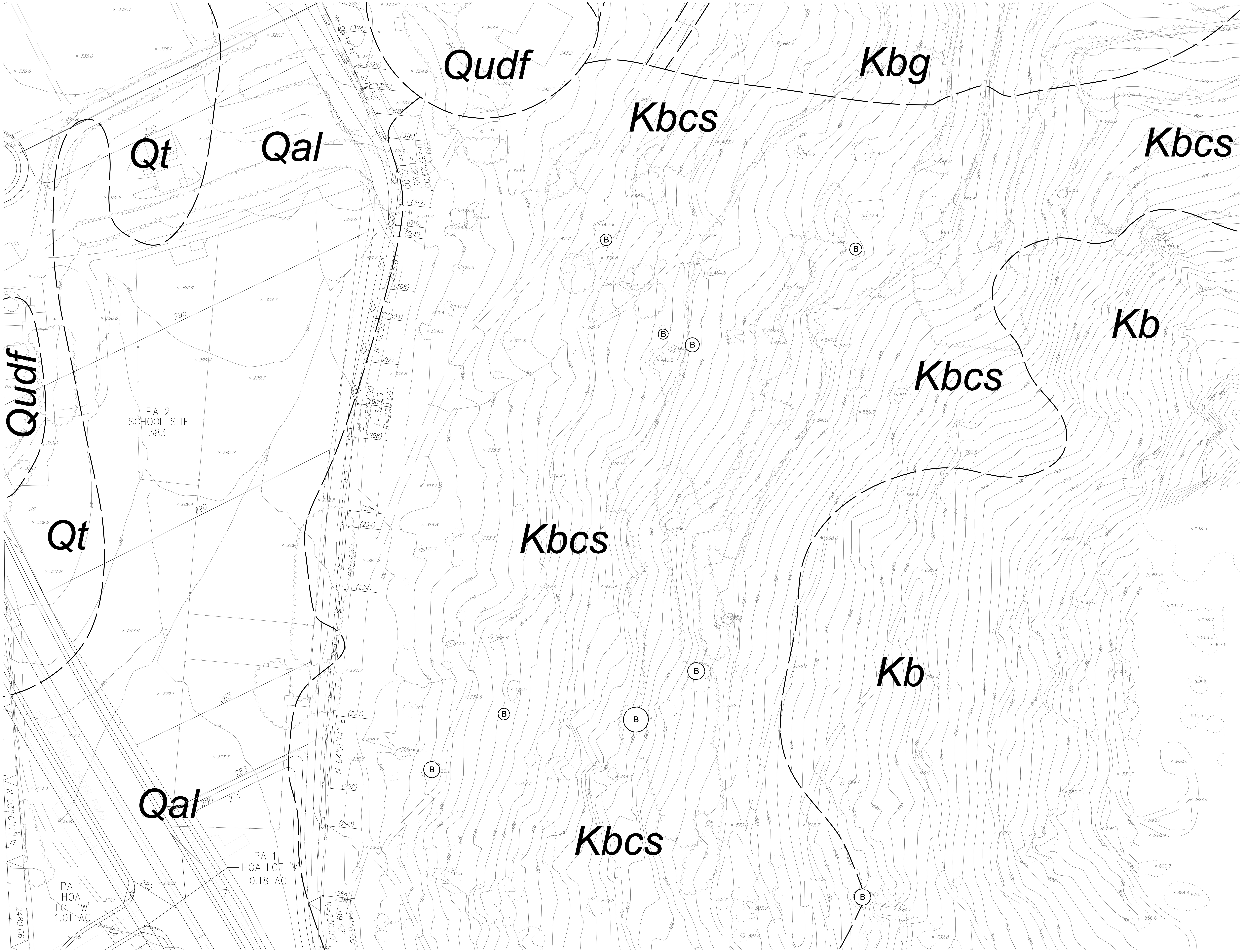
GEOCON INCORPORATED

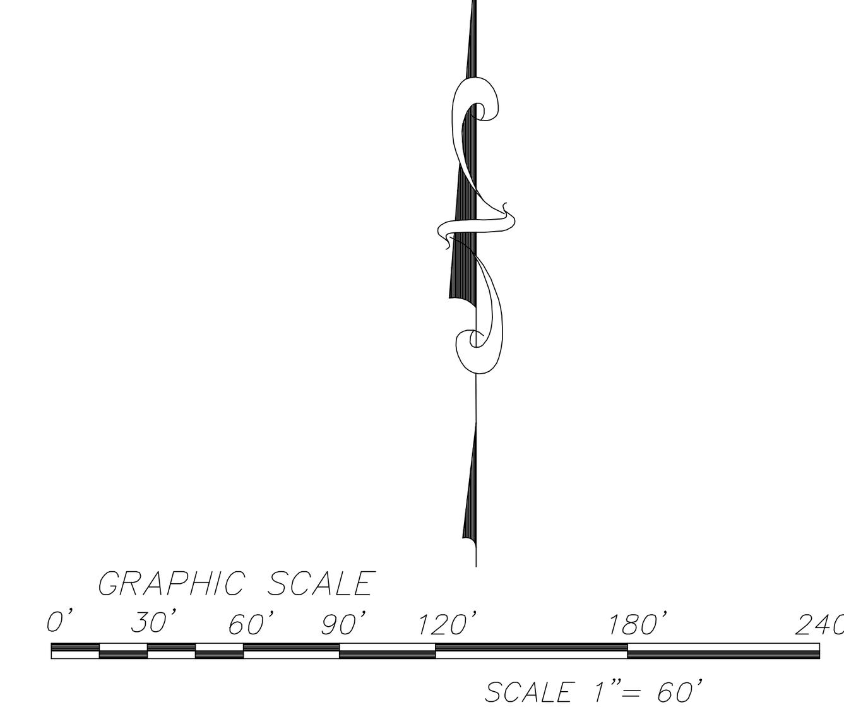


Rodney C. Mikesell
GE 2533

RCM:dmc

(2) Addressee
(2) Recon Environmental Inc.
Attention: Ms. Bobbi Herdes





LEGEND

Qudf ........UNDOCUMENTED FILL

Qudfr ........UNDOCUMENTED FILL RUBBLE
(Mostly oversize concrete chunks)

Qal ....ALLUVIUM

Qt ....TERRACE DEPOSIT

Kb ....BONSALL TONALITE

Kbg ....BONSALL TONALITE GNEISS

Kbcs ....BONSALL TONALITE CORESTONE ZONE

Ksm ....SAN MARCOS GABBRO

〜 ....APPROX. LOCATION OF GEOLOGIC CONTACT

(B) ....APPROX. LOCATION OF LARGE BOULDER OR BOULDERS TO BE STABILIZED OR REMOVED
(Diameter of symbol approximate maximum diameter of boulder)

GEOLOGIC MAP

MEADOWOOD

SAN DIEGO COUNTY, CALIFORNIA

GEOCON
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6960 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121 - 2974
PHONE 858 558-6900 - FAX 858 558-6159

SCALE 1" = 100'	DATE 09 - 16 - 2008	
PROJECT NO. 06931 - 42 - 01		FIGURE 1
SHEET 1 OF 2		

GEOLOGIC MAP

MEADOWOOD

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SCALE 1" = 100' | DATE 09 - 16 - 2008

PROJECT NO. 06931 - 42 - 01 | FIGURE 2

SHEET 2 OF 2

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